



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Sergei Kryukov, et al. Examiner: Unknown  
Serial No. 09/897,765 Group Art Unit: 2624  
Filed: July 2, 2001 Docket No. 1202.021US1  
Title: REMOVAL OF BLOCK ENCODING ARTIFACTS

COMMUNICATION RE: INCORRECT FILING RECEIPT

Assistant Commissioner for Patents  
Washington, D.C. 20231

Applicants hereby request correction of the Filing Receipt with respect to the above-identified patent application. In the Filing Receipt received November 8, 2001, (copy enclosed), the number of independent claims is incorrect. The Filing Receipt reads, "6", it should read "4". This is evidenced by the claims, upon the original copy of the patent application (enclosed).

Applicants would appreciate the above-identified printing error be corrected and that a new "corrected" filing receipt be sent to Applicants' representatives at the address given below.

Respectfully submitted,

SERGEI KRYUKOV, et al.

By Their Representatives,

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Date: 19 November 2001

By: Mark A. Litman  
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CERTIFICATE UNDER 37 C.F.R. 1.8: The undersigned hereby certifies that this Transmittal Letter and the paper, as described herein, are being deposited in the United States Postal Service, as first class mail, with sufficient postage, in an envelope addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231 on 19 November 2001.

Mark A. Litman  
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APPLICATION NUMBER	FILING DATE	GRP ART UNIT	FIL FEE REC'D	ATTY. DOCKET NO	DRAWINGS	TOT CLAIMS	IND CLAIMS
09/897,765 ✓	11/02/2001 ✓	2624 ✓	1008	1202.021US1 ✓	2 ✓	23 ✓	6 ✓

CONFIRMATION NO. 8208

UPDATED FILING RECEIPT



\*OC000000007019535\*

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York Business Center, Suite 205  
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Date Mailed: 11/05/2001

Receipt is acknowledged of this nonprovisional Patent Application. It will be considered in its order and you will be notified as to the results of the examination. Be sure to provide the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION when inquiring about this application. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. **If an error is noted on this Filing Receipt, please write to the Office of Initial Patent Examination's Customer Service Center. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections (if appropriate).**

**Applicant(s)**

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**Assignment For Published Patent Application**

JASC Software; ✓

**Domestic Priority data as claimed by applicant**

**Foreign Applications**

If Required, Foreign Filing License Granted 08/21/2001

Projected Publication Date: 01/02/2003

Non-Publication Request: No ✓

Early Publication Request: No ✓

**Title**

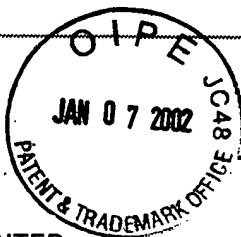
Removal of block encoding artifacts ✓

**received**  
11/8/01 am

COPY

Preliminary Class

382



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**Title 35, United States Code, Section 184**  
**Title 37, Code of Federal Regulations, 5.11 & 5.15**

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COPY

WHAT IS CLAIMED:

~~Independent~~ 1. A method of reducing artifacts in an image previously processed by block transform encoding comprising the steps of:

- 5           determining block boundaries;
- determining an approximate metric of artifact visibility;
- adaptively filtering luminance;
- adaptively adjusting local saturation variation;
- adaptively simulating high spatial frequency image detail;

10   wherein the adaptive steps are executed to a degree or an amount dependent on the metric of artifact severity.

2. The method of claim 1 wherein prior to adaptively filtering luminance, luminance values are interpolated across block boundaries

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3. The method of claim 1 wherein in conjunction with adaptively filtering luminance, chrominance is adaptively filtered.

4. The method of claim 2 wherein in conjunction with adaptively filtering luminance, chrominance is adaptively filtered.

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~~independent~~ 5. A method of reducing artifacts in an image previously processed by block transform encoding comprising the steps of:

- determining block boundaries;
- 25       determining an approximate metric of artifact visibility;
- adaptively filtering luminance with a filter;
- adaptively increasing local chrominance contrast;
- adaptively simulating high frequency image detail by means of sharpening and addition of noise;

30   wherein the adaptive steps are executed to degree that depends on the metric of artifact visibility.

independent → 15. A method of reducing artifacts in an image previously processed by block transform encoding comprising the step of selecting a median filter window based on an assessment of a pixel value according to a variance of a binary mask.

5 16. The method of claim 1 wherein the pixel value comprises luminance texture.

independent → 17. A method of reducing artifacts in an image comprising the step of selecting a median filter window based on an assessment of a pixel value according to a variance of a binary mask.

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18. A computer having software and hardware therein that is capable of executing and performing the method of claim 1.

15 19. A computer having software and hardware therein that is capable of executing and performing the method of claim 2.

20. A computer having software and hardware therein that is capable of executing and performing the method of claim 5.

20 21. A computer having software and hardware therein that is capable of executing and performing the method of claim 8.

22. A computer having software and hardware therein that is capable of executing and performing the method of claim 10.

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23. A computer having software and hardware therein that is capable of executing and performing the method of claim 15.

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Total Independent Claims = ④